Assignment 1

Due: Sept 24th, 2018 at 13:59

Question 1: (20 points)

For this assignment, your code has to apply to "Google R style". Since this is the first assignment, you are required to leave comments for all codes in Q2 and Q3.

Question 2: Self-defined function (25 points)

2520 is the smallest number that can be divided by each of the numbers from 1 to 10 without any remainder. Now you need to create a function to find the smallest positive number that is evenly divisible by two numbers you input into the function.

Question 3: "apply" function (25 points)

Download *JPM.csv* from canvas and read this table in R using command. For this table, name it as *JPM2018* and do following things:

- Create a sub-table which only contains Open, High, Low and Close
- Using "sapply" function we mentioned in class to calculate mean value for each column and save it as a vector
- Using "apply" function we mentioned in class to calculate mean value for each row and save it as a 3 by 5 matrix, the data should be assigned by row.

Question 4: "apply" function (25 points)

You can answer following sub-questions in the r file:

1. What's the difference between "mapply" and "lapply"?
2. How to use "mapply"? Write an example.
3. Can you use "mapply" to the function you created in Question 2? If yes, assign two vectors as inputs for the self-defined function. If not, explain why.

Question 5: Self-defined function (5 Points)

Write a self-define function which can distinguish an input number is prime number or not. Please give a example, for this example, use a number which is lower than 100.